

Claims

WHAT IS CLAIMED IS:

1. A method comprising:

computing an avatar behavior definition based on environmental context of a virtual reality environment and a randomly selected training behavior from a training set of personalized sample behaviors; and

generating at least one control signal to guide behavior of an entity in the virtual reality environment in accordance with the avatar behavior definition.

2. The method of claim 1 wherein the avatar behavior definition is associated with a track segment.

3. The method of claim 1 further comprising:

generating the personalized sample behaviors by recording behavior of a player in one or more training sessions in the virtual reality environment.

4. The method of claim 1 wherein the computing operation comprises:

combining a plurality of the personalized sample behaviors for a current game segment to yield the avatar behavior definition for the current game segment.

5. The method of claim 1 wherein the computing operation comprises:

combining weighted contributions of a plurality of the personalized sample behaviors for a current game segment to yield the avatar behavior definition for the current game segment.

1           6. The method of claim 1 wherein the computing operation comprises:  
2           randomly selecting a personalized sample behavior from the training set  
3           using a randomly selected sample index that designates at least one of the  
4           personalized sample behaviors.

5           7. The method of claim 1 further comprising:  
6           storing the personalized sample behaviors in a persistent storage medium.

7           8. The method of claim 1 further comprising:  
8           recording behavior of a player in competition against the entity during  
9           game play in the virtual reality environment; and  
10          adding the recorded behavior to the personalized sample behaviors  
11          associated with the player during the game play.

12          9. The method of claim 1 wherein the computing operation comprises:  
13          identifying game segments in the training set that match the current game  
14          segment by evaluating game segment descriptors associated with personalized  
15          sample behaviors against environmental context information associated with the  
16          current game segment.  
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2 10. A computer program product encoding a computer program for  
3 executing on a computer system a computer process, the computer process  
4 comprising:

5 computing an avatar behavior definition based on environmental context of  
6 a virtual reality environment and a randomly selected training behavior from a  
7 training set of personalized sample behaviors; and

8 generating at least one control signal to guide behavior of an entity in the  
9 virtual reality environment in accordance with the avatar behavior definition.

10 11. The computer program product of claim 10 wherein the avatar behavior  
11 definition is associated with a game segment.

12 12. The computer program product of claim 10 wherein the computer  
13 process further comprises:

14 generating the personalized sample behaviors by recording behavior of a  
15 player in one or more training sessions in the virtual reality environment.

16 13. The computer program product of claim 10 wherein the computing  
17 operation comprises:

18 combining a plurality of the personalized sample behaviors for a current  
19 game segment to yield the avatar behavior definition for the current game  
20 segment.  
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1           14. The computer program product of claim 10 wherein the computing  
2 operation comprises:

3           combining weighted contributions of a plurality of the personalized sample  
4 behaviors for a current game segment to yield the avatar behavior definition for  
5 the current game segment.

6           15. The computer program product of claim 10 wherein the computing  
7 operation comprises:

8           randomly selecting a personalized sample behavior from the training set  
9 using a randomly selected sample index that designates at least one of the  
10 personalized sample behaviors.

11           16. The computer program product of claim 10 wherein the computer  
12 process further comprises:

13           storing the personalized sample behaviors in a persistent storage medium.

14           17. The computer program product of claim 10 wherein the computer  
15 process further comprises:

16           recording behavior of a player in competition against the entity during  
17 game play in the virtual reality environment; and

18           adding the recorded behavior to the personalized sample behaviors  
19 associated with the player during the game play.

20           18. The computer program product of claim 10 wherein the computing  
21 operation comprises:

22           identifying game segments in the training set that match the current game  
23 segment by evaluating game segment descriptors associated with personalized  
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1 sample behaviors against environmental context information associated with the  
2 current game segment.

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1 19. A system comprising:  
2 an avatar behavior definition module computing an avatar behavior  
3 definition based on environmental context of a virtual reality environment and a  
4 randomly selected training behavior from a training set of personalized sample  
5 behaviors; and

6 a behavior control system generating at least one control signal to guide  
7 behavior of an entity in the virtual reality environment in accordance with the  
8 avatar behavior definition.

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10 20. The system of claim 19 wherein the avatar behavior definition is  
11 associated with a game segment.

12 21. The system of claim 19 further comprising:  
13 a training module generating the personalized sample behaviors by  
14 recording behavior of a player in one or more training sessions in the virtual  
15 reality environment.

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17 22. The system of claim 19 wherein the computing operation comprises:  
18 a probability density function module combining a plurality of the  
19 personalized sample behaviors for a current game segment to yield the avatar  
20 behavior definition for the current segment.

21 23. The system of claim 19 wherein the computing operation comprises:  
22 a probability density function module combining weighted contributions of  
23 a plurality of the personalized sample behaviors for a current game segment to  
24 yield the avatar behavior definition for the current segment.  
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1           24. The system of claim 19 wherein the computing operation comprises:  
2           a probability density function module randomly selecting a personalized  
3 sample behavior from the training set using a randomly selected sample index that  
4 designates at least one of the personalized sample behaviors.

5           25. The system of claim 19 further comprising:  
6           a training module storing the personalized sample behaviors in a persistent  
7 storage medium.

8           26. The system of claim 19 further comprising:  
9           a training module recording behavior of a player in competition against the  
10 entity during game play in the virtual reality environment and adding the recorded  
11 behavior to the personalized sample behaviors associated with the player during  
12 game play.

13           27. The system of claim 19 wherein the computing operation comprises:  
14           a probability density function module identifying game segments in the  
15 training set that match the current game segment by evaluating game segment  
16 descriptors associated with personalized sample behaviors against environmental  
17 context information associated with the current game segment.  
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